

APPLICATION OF PARTICIPATORY RURAL APPRAISAL(PRA) ON THE SOCIO-ECONOMIC IMPACT OF WATERSHED ACTIVITIES

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Abstract

Currently most studies on the socio-economic impacts of aquaculture activities on information gathering from water users are based on a questionnaire and surveys of these areas. By selecting small samples from a large community and examining questionnaires, they then analyze the obtained data using statistical methods. In this way, it is assumed that the actions of the personal tastes of the interviewers and the interviewers do not affect the process. But in fact, such surveys have many weaknesses Because the questionnaire designers want to make comprehensive inquiries, but because they are not able to identify the important local issues, they increase the number of questions to be more reliable. And this sometimes comes with the preparation of long questionnaires with a few hundred questions that can rarely be addressed in the answer to it. Due to the weaknesses in traditional practices, approaches and participatory approaches have expanded in recent years. These approaches began with the improvement and modification of data collection methods and then became known as Participatory Rural Appraisal (PRA). This growing process continues to devise ways to engage in practical research, training adult adults at its highest level. This article is based on a descriptive analytical research method. These methods are not only used to provide exteriors, but also for locals themselves to learn and validate their status. Given the valuable features of rural cooperative evaluation, it is possible to analyze socio-economic impacts of activities carried out in the watersheds and, by employing them, developers and researchers have a good opportunity to work together, they will consult with the villagers in assessing their basic needs and reach agreement, and as a result all members understand the importance of each other's role. So that the villagers are assured that the outside can help them without imposing their opinion.

Keywords: Participatory Rural Appraisal(PRA), Watershed activities, Socio-economic impacts, Villagers.

Introduction

A watershed can simply be defined as any surface area from which rainfall is collected and drained to a common single outlet. Watershed is synonymous with a drainage basin or catchment area. A drainage basin is can involve several towns or regions and even countries (Li et al., 2005). There is not a determined size of a watershed as it may differ from a few hectares to several thousands of hectares of areas (Adams and Godwin, 1998). In order to provide food and livelihoods, humans converted pastures to rainforests and destroyed forests and plowed up the slopes and eroded the balance of nature. Also, the unnecessary use of agricultural land and forests, excessive grazing and non-compliance with the principles of rangelands have led to soil erosion and sediment production. Considering the destruction process and emphasizing that water and soil are the main sources of agricultural activities in rural areas of the country, the necessity of conservation and stability of these resources is determined. In this regard, the World Bank has established sustainable soil management including maintaining and increasing grassland production capabilities, upstream, downstream and downstream landscapes, supporting forestry areas and preserving commercial and non-forestry potential of the forest, and comprehensive water management for water conservation And increasing the capacity of aquifers for use on the farm and other productive activities and

measures to prevent erosion or reduce the destructive effects of earlier misuse, which is increasing in importance on the upstream and watersheds.

In other words, sustainable soil management can be defined as another definition of watershed management and comprehensive management of watersheds of the Staten this regard, only comprehensive attention to watersheds and a systematic approach to all factors affecting human factors and inhuman factors as well as factors within the basins can be effective in sustainable water and soil management. Therefore, the organization of forests, rangelands and watershed management has been implementing projects for conserving water resources and conservation of natural resources for many years. Of course, the significant and valuable results of activities in the management of natural resources and watershed management have introduced new ideas in studies of projects and projects of recent years, including: Rural participation plans aimed at preserving soil and water resources can be called win. In this regard, the history of natural resource management clearly indicates that the management of natural resources is not something that can be done by the administrative and watershed system alone. People who have always lived in the forest, near the rangeland and other natural resources, adapted to it, and have used these facilities, are not the ones who are not careful about these resources.

But the main question is: "Why is it that the natural resources of the region are becoming more limited and the scope of the deserts become wider? "Why did not all the care and diligence of expert opinions diminish the routine of destruction?" These points are not only in Iran, but also in other countries of the world. And the control of the factors of destruction and encouragement of constructive factors is not limited to technical views and expert plans. But mainly in the social behavior of the utilized people, which is well represented in the form of participation and can play a vital role in the recovery of natural resources. Therefore, the use of public participation as a requirement and necessity of the plan (Khatoonabadi, 1991).

Materials and Methods

Participatory watershed management has been defined as a process "which aims to create as elf-supporting system, which is essential for sustainability" (Wani *et al.*, 2005). Participatory Rural Appraisal (PRA) is a process of understanding people, their resources, their socio-economic conditions and a process of exploring their problems, their aspirations and potentials in partnership with people themselves. PRA is an integral component of watershed management (Winnegge, 2005).

Participatory Evaluation Method

The emergence of participatory approaches one of the major approaches that have been widely used in decades is the development model from the top to bottom. In these approaches, experts and planners, without the participation of the people and with their personal taste, collect statistics and information about the villagers and base their development results on the villages' perceptions. As Chambers says, rural development reformers are people who are involved with rural development, but they themselves are neither rural nor poor (Chambers, 1992). These rural experts visit surface surveys of the village using survey-based survey methods the collection of information is incomplete and far from reality and the implementation of the projects and projects concerned. As Chambers points out in his book "Prioritizing the Poor", rural experts are exposed to bias and orientation in contact with rural people and their perceptions of their lives. These issues have led to the ineffectiveness of development plans and the groundwork for the emergence of participatory approaches and in the first place, a participatory evaluation method. These approaches, while emphasizing the systematic attitude and sustainable participation of people in the planning process, have also been instrumental in integrating indigenous knowledge and formal knowledge. Using these methods is very effective in empowering people and building a developed community. Of course, it should be noted that the mere announcement of participation is not enough, but it should be applied in practice, which requires time, resources and stability (Zakia et al., 2013). The participatory rural assessment methodology includes a variety of approaches, approaches and behaviors that are diverse. So that local people, through these methods, improve their ability to explain their living conditions and conditions to the extent that they can personally plan, analyze, and evaluate the results of their respective activities. . According to Chambers (PRA), it is a philosophy that requires people from the desired community environment to learn from individuals within society about the environment and the realities of those societies (Fami, 2000). Indeed (PRA) is an attempt to start the development process from within the community or target group and relies on the potential and potential of the target group in solving its problems. In other words, the PRA creates an institutional structure and emphasizes the systemic participation of local communities (Adebo, 2000).

Rural participatory evaluation can be defined as a growing family of approaches and practices that can be used to empower rural people in analyzing and sharing their knowledge of their local living conditions (Doyle and Carney, 2003). However, the trait is "rural", but the learning process is more than just limited to the level of the village (Caustro, 2003). The use of the (PRA) strengthens the enthusiasm and cooperation of individuals in local communities. (Mukarji, 2004). The Purpose (PRA) is for communities to analyze themselves, so that they achieve their shared achievements in their development process. Each brand. (PRA) is a way of thinking and behavior that requires roles to be displaced. Instead of an expert coming out and telling how to solve the problem and how to improve the living conditions, now those who come out of the field are joined to the local people in the learning process to jointly analyze, Implementing and evaluating their activities to improve their living conditions (Ling, 2011). In fact, the method (PRA) means reversing the relationships between forces. For the flow of information and how to use it, it is no longer dictated by professionals or non-rural organizations, but villagers themselves create information, identify goals, and control the implementation of activities that affect their lives.

The evolutionary approach of the participatory rural assessment method The initial activities of the PRA methodology were initiated in the 1932's with the initiation and expansion of participatory approaches. Because in this decade planners and developers were disillusioned with progress and development, especially in rural areas. On the other hand, at this time, it was considered that if rural people were involved in identifying their problems and needs, they would most likely be able to support activities that would take their place. Thus, the methods of the questionnaire that have

been used for a long time due to the lack of flexible formats, the lack of attention to local facts and complexity in the analysis have been left out (Aniaegbunam, 2004). Thus, the PRA method There are many ups and downs in research, planning, monitoring and evaluation methods (Alam and Ihsan, 2012).

Robert Chambers states nine important principles in implementing a participatory assessment in a desirable manner (Chambers 1994).

- 1. Reversal of the Learning Stream: This principle points to the attention of external experts and their acknowledgment of the precious experiences of villagers and locals, in a way that, unlike the past exterior approaches that sought to establish the preference of their knowledge of the villagers, were reversed Learning outreach and so-called rural recruits leave their teacher's position and leave the villagers about the status of rural life. In this way, the acquisition of technical and native knowledge will take place directly and in the context of local visits to the villagers.
- 2. Researcher's rapid learning: This approach is based on a conscious discovery and flexible application of collaborative techniques and techniques, timeliness, parallel examination of facts, and the ability to repeat existing methods in the learning process of the community, external experts and researchers to continually recognize the conditions. Directs the desired
- 3. Compensation for Distortions: This principle reminds the outside world to listen to speeches in discussions rather than lectures. It also teaches them to focus in particular on contemplation instead of acceleration and non-imposition, rather than making it important.
- 4. Optimal waivers: This principle links the cost of learning from the community to the integrity of the information. This is accompanied by a kind of waiver and no reaction to the collection of additional information. In other words, instead of gathering information that is often unrelated to an issue that can be costly, the information that is needed is minimized and cost-effective.
- 5. Triangulation: triangulation consists of a triple set of sources, methods, and researchers for checking the accuracy of the data, including the use of multiple sources, various specialists and various methods of analysis and explanation of the distinctive features that include all views Is. This principle is closely related to the openness of the evaluation process to all the participants, so that all rural people participate freely in discussions and express favorable or opposing views in the discussions.

- 6. Diversity in the collection of information: This principle points to the diverse sources of information in the information gathering path, in other words, it introduces an attitude of a systematic approach to previous approaches. In this way, with the previous principle, triangulation has close interconnections, and in the discussion of the preceding discussion, the equilibrium point is provided for the principle of optimal waiver for information gathering.
- 7. Facilitating: Facilitating the development of participatory thinking in new rural development approaches, such as rural participatory evaluation, the outflow of internal education, the imposition of ideas and, in general, the one-way flow and the top-down process of technology transfer and development in accordance with previous inverse principles And rural peers in a different outfit will make the new position easier. In this way, the villagers, as analysts, state the critical conditions in the agricultural life, and external experts facilitate the conditions only when they are needed.
- 8. Caution and Accountability: This vigilance and acceptance of responsibility affect both sides of the assessment, that is, external and internal, in a manner in which the facilitator continually transforms his behavior and increases it Understands new situations and rural situations.
- 9. Sharing and sharing information: sharing and sharing information and experiences between analysts (people) and facilitators is one of the important principles of this approach that provides a reversal of the learning flow. In addition, through the exchange and sharing of information among members of the rural community, the free flow of the orbits re-establishes this psychological approach, and everyone has the opportunity to talk about their experiences and multi-voices into the rural working environments.

Participation is considered as a kind of targeted action, which is reflected in the interactive process between the actor and his social environment in order to achieve definite and predetermined goals People's participation seems to be the same as the missing link between the state system and the water and soil resources, and in general natural resources (Azkia, 2005).

With the help of people's participation, the idea of promoting the conservation of natural resources and of the soil and water in rural communities can be promoted, and government plots are tied to the needs of rural communities.

In group management knowledge, participation is defined as "participation in the mental and emotional involvement of individuals in a group of situations that prompts them to help each other to achieve group goals and to partner in work responsibilities". in the definition, there are three important components:

- Mental and emotional involvement.
- Motivation to help.
- Accept responsibility

We also refer to other definitions of participation:

- Participation is an activity that is conditional on equality and human freedom
- Activity partnership is conscious, free and broad
- Participation is not imposed or inviting, but a kind of empowerment and empowerment to weak groups to play a role in confronting their own problems. Such a partnership is neither a proclamation nor a livelihood, but it must be achieved. Therefore, it cannot be regarded as a privilege given by governments to their own nationals.
- Participation means paying attention to the role of people in political decision-making and access to sources of power.
- Contributing to a specific goal, between at least two subjects, is influenced by environmental stimuli. (Definition of behaviorists)
- Participation is a systemic and sympathetic process in which the function of the components and elements of the system and the system leads to the survival, durability and balance of the entire system (the definition of constructivists and functionalists).
- Participation for Misra is the growth of basic human abilities, including human dignity and the responsibility of mankind in the fertility of the decision-making force and the action that is measured and thoughtful (Tawasolli.2000. 43).

In order to plan or decide on rural communities in catchment areas, it is necessary to know enough about it. In such a way, without accurate knowledge of the status quo, the needs and aspirations of a community cannot be judged about the changes that can be made in the future So in the rural planning process, the first thing we need is reliable information from the village and its people., Participatory Rural Appraisal is a method primarily used by international organizations primarily in the field of rural development and local communities in participatory planning (Jomehpour, 1995).

In this way, there are barriers and challenges in order to reach the institutional and continuous participation of the people and to monitor the management of natural resources by the people themselves. What approach and process can lead to

realization of institutionalized participation and what should be provided. And with what point of view and approach to provide ground for establishing the institutional participation of rural people, a question that is certainly not easy to answer is a question that is a response that ensures the success of water and land management projects and other rural projects.

On this basis, at the end of the 1980s, rural participatory evaluation was developed to respond to the rapid and rapid implementation of the rapid rural assessment, and in the RRA the target group was encouraged to learn, and the role of external experts in facilitating the learning process was reduced.

Although the origin of the participatory evaluation of Southern Asia, it is now widely used in all parts of the world. The PRA has been extensively developed and is even used in governmental organizations. The extension of the scope of this approach since the beginning of the activity, that is, after The 1980s or the mid-1990s reached more than 100 countries. So, over the past decade, the most important issues of watershed management, the issue of attracting rural communities to protect the soil and water resources has been supported, including the rapid evaluation of rural participation.

Regarding the importance of social participation, some of the scholars such as Ron Tollan, Peter O'Keeley, Robert Chambers, and Hwola Kauteri have focused their attention on recognizing social participation and its applications, in particular the role of participation in social, economic, social and participatory development, Group development, participation, participation and leadership in small groups, group leadership methods in increasing group members' participation, participation in work groups, participation in local communities and councils, interaction and participation of social psychology. Group decision making, group dynamics as a factor affecting participatory attitudes (Mohseni Tabrizi, 1998).

Outsiders initiate, facilitate and then critically observe the process of analysis, especially with visual (mapping, diagramming, etc.) analysis by groups. In contrast with most questionnaire surveys, this group visual analysis gives the observer time and freedom to watch interactions, to see how much cross-checking and correction take place, to assess the commitment of analysts, and to judge whether information is being distorted or withheld.

A group-visual synergy often develops (Figure 1) with cumulative group enthusiasm, adding and amending detail in order to create a complete and accurate picture

It is important to study the factors affecting participation in order to achieve sustainable

development with emphasis on urban and rural human resources.

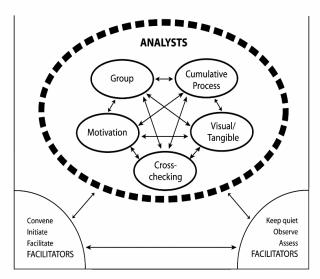


Figure 1. Group-visual synergy in PRA.

To this end, in order to achieve the goal of sustainable development and to preserve water and land resources as national capital, it should be investigated and evaluated the obstacles and problems of rural cooperative projects in order to obtain the results of these plans in order to plan public participation and provide The participatory model was appropriate to the villagers' need and level of knowledge. Therefore, identifying the cultural and socio-cultural background of the participant villagers is an issue that matters.

The United Social Nations Institute for Development for Social Development defines partnership as "organized efforts to increase the control of resources and regulators in certain social contexts by some groups and movements that have so far been excluded from the scope of such control". Determining the willingness and goals of the participant through his knowledge of the consequences of his actions leads to participation

Come out of the community.

In 1988 Paul identified four levels for participation in local communities, which are respectively:

- First level: information sharing (lowest level).
- Second level: Consultation.
- Third level: decision-making.
- Level Four: Acting (Top Level)

George Herbert Mead, among the theorists of social interaction, divides himself into (individual) and (social). He believes that: Social is, in fact, the reflection and expression of the norms and values of society in the individual. According to Mead, socialization is a process that teaches people how to participate as an effective member. Family, school, mosque, contact with friends and colleagues and the

media can be considered as factors affecting the socialization of the individual.

In this way, Mid, believes that social behavior is influenced by the four fundamental factors that exist in human society. These factors include communications, economic exchanges, religious beliefs and religious interests and social conflict (Tavassoli, 2000) Sharam; points out: Traditional means of communication are not widely used and not very effective. A "new" society is in need of mass communication because the content of most programs, even advertisements, in the media, has the nature of information, education and advertising, and is designed to inform or encourage people about the types of modernization (Azika. 2005).

Thus, rural participation as other human activities are influenced by some social, economic and individual factors. Since the basis of the plan (PRA) is based on the participation of villagers in the process of natural resource management and water management.

Result and Discussion

Techniques and approaches that set up a rapid village assessment are for the communication between developers that most of them are disproportionate due to inadequate understanding of planners from the local community, in the hypothesis of externalities (scholars) and internalities (villagers) The assumption that externalities are generally better able to develop development plans and make suggestions in this regard From this perspective, Rapid Rural Assessment is a tool for helping rural developers work with rural communities while working with rural communities.

However, what developed the approach was the priorities and concerns of developers in the development process for the people of the village. For a long time, rural researchers led the local people to the planning process. And this led to some deviations in the development process. The agreement and interaction with the use of more appropriate tools such as the RRA could lead to a relative improvement of these conditions, but the best solution is that they have not prepared themselves for the program itself. In this process, researchers have the sole role to play in helping, supporting, and directing the whole.

The arranged tools for moderated and developed communication for rapid rural evaluation and the desire of some development agencies to achieve more fundamental changes in the relationship between planners and the public have created an approach that has been recognized in the PRA village participatory evaluation in recent years.

As a result, Rural participatory evaluation method has been developed from the combination and combination of other methods. In other words, based on the experiences of the rapid rural evaluation method, one of the reasons that led to the rapid rural evaluation method has led to a participatory rural evaluation. The ability to control externalities in the implementation of the program, the participation of villagers and the extraction of information as a target.

One of the main objectives of integrated management of soil and water resources was the implementation of a participatory approach in water and land resources management as a leading project in order to gain experience and localization of this approach in the country. The methods of engineering and non-mechanical engineering, along with the justification and training of the local community, were well known and commonly used methods of watershed management in the country. The main goals of attracting participation in watershed management, except for one limited experience, were the use of cheap human resources and incentives to maintain water and land structures. This concept was based on the following benefits:

- Using indigenous knowledge
- Using local information
- Transparency in the decision-making cycle

A public participation approach was adopted with the aim of sharing local knowledge and information and development ideas. The Sustainable Development Model, confirming the interdependence of environmental and socioeconomic issues, emphasizes the need for integrated planning and active participation in decision making.

Participatory institutions and the decision-making process for soil conservation contain elements and interactions that indicate that the system of social participation of the exploiters is in the maintenance of water and soil resources. Therefore, the general principles governing the native knowledge system have stated soil conservation as follows (Kazemi, 1997).

Meanwhile, the World Bank's Operations Policy Division, after a four-year review of partnership with significant evidence, suggests that partnership can improve the quality, effectiveness and sustainability of projects in many situations. In the World Bank's work record, there are examples of agricultural projects, natural resources management, primary health, family planning, rural infrastructure of urban housing, water and public health from participatory demand-driven projects. Many social fund projects are demand-driven collaborative enterprises that have generally received ratings in satisfactory the Internal Banking Reconciliation System (Parker, and Abbe, 1997). According to development experts, the current goals of many development agencies are to create effective partnerships between donors and stakeholders, and between the government and the people, thereby increasing the possibility of successful intervention called "development".

The role of facilitators in participatory rural evaluation

Facilitator is a researcher who, with his favorable attitude, provides analysis, planning, decision making and action to people in rural communities (analysts). Regarding the nature of the Rural Participatory Evaluation Method (PRA), it was previously stated that this method seeks to empower villagers in expressing issues, organizing their analysis and practical actions. Robert Chambers, in his famous book, "Who Computes Reality?" While criticizing the traditional approach to research and development, sees the advantage of the participatory assessment method in that, which, contrary to previous approaches, "encourages and" encourages "them" They "let's take the lead, take the bulk of the plan, collect, supply, analyze and plan information, and ultimately plan. He says: "We are facilitators, learners and advisers." "Our activities are aimed at creating a relationship, promoting activity, conducting research, helping to use methods, and encouraging local residents to choose and devise their own methods, we look, we listen," he said. And we learn. " In this way, Chambers goes on to describe the task and the nature of the facilitator's work so far as to call upon them, in addition to accepting the tasks of conceiving and harmonizing, to learn and accept what is in the community (Chambers, 1992). Creating this the relationship involves identifying the capabilities of the local population in expressing, analyzing, planning and practicing. Local residents have shown that they have a very high ability to draw, model, view, list, count, estimate, compare, rank, score, and plot. This ability is more than what the outside had imagined before. Most of this affects through visualization, expression, and sharing in knowledge, judgment, and analysis (Taleshi, 2011). In a participatory rural evaluation, facilitator is required to strengthen communication skills related to understanding and understanding messages in themselves. In this way, visual methods can be powerful for those who are weak, inert, and illiterate. Many local villages may not read the written material and may have problems with images, maps, and diagrams provided by the outside, but almost all of them can draw routines and draw a graph. Ways to Attract Participation: (Mahdavivafa, 2015).

- 1. Creating incentives for owners to own natural resources.
- 2. The use of massive and creative people in the revival and conservation of natural resources
- 3. Principal and economic exploitation of natural resources based on guidelines and laws

- 4. Emphasis on voluntary participation and belief in people's views on natural resources issues from planners and administrators.
- Establishing and correcting appropriate rules for the security of investments in various sectors of natural resources.
- 6. Promoting the awareness of natural resource exploiters and expanding cultural centers and training among the exploiters.
- 7. Creating and developing more people's organizations and us
- 8. Establishing close links between research, education, promotion and implementation

Conclusion

Participation means volunteering and wisdom of water minders in the development process. In other words, participation is part of the process of integrated rural development within the framework of the development of a watershed. By building and establishing a power institution, the ground for the organization and participation of rural masses in the process of development along the watershed of the village is provided. This process, along with the monitoring of water and soil and water resources in watersheds, follows the following approaches.

- Increased production and productivity Equality of opportunity
- Profitable employment Self-respect and selfcontrol
- Participation of people in the development process
- Management of ecosystems

In fact, the participatory development approach has been developed in complementing other developmental considerations such as endogenous growth, the biology of the region, and has addressed the issue of empowerment, potential capabilities, and ultimately human-centered development. The basic concept of human development is discussed as the axis and factor of development. In this approach, the participation of villagers is not limited to the minority of the rural elites, but also the transformation of existing state structures, and the people of the marginalized and the poor must express their views and The culture of silence is gradually broken down through capacity building and empowerment processes, which facilitates the discussion of the issue of developing rural participation in a conceptual framework of external facilitators (public) and facilitators (local).

Here, by means of capability and capacity building, external facilitators (experts) are made to local facilitators (pioneers), and they will also reciprocally transfer it to the rural population and lead to local empowerment. Ability to believe in one's own parallel conversation process and to reinforce self-confidence in order to express its innate creativity. In this regard, there is only one systemic interconnection between the various components of economic, social, and environmental development that we, as one, share the achievement of the community in sustainable development. Also, the role of government in this paradigm from the producer and development center has been changed to create a legal framework for the empowerment of public organizations. Therefore, the most important issue is for the active participation of local people in empowerment .

The natural resources management techniques, While many new ways of managing natural resources emphasize the greater participation of people, natural resource residents and utilizations in the planning, management, implementation and monitoring of these resources, on the one hand, existing methods still allow mechanisms that can be balanced There was no logical relationship between the "expert" and how people participated, and on the other hand, how experts and experts communicate with indigenous knowledge in these methods.

The top-down approaches over the past few years have had a lot of defeats, which in this article do not intend to criticize, but contemporary people-oriented approaches that are supposed to replace previous methods are also somewhat similar.

Contemporary peoples' approaches that have been introduced as substitutes for top-down approaches that have been dominant over the past years and, like previous methods, provide the mechanisms by which they can be from one to a reasonable and proportionate balance between the "expert" (In terms of scientific-technical dimensions) and collective participation, and on the other hand, have been incongruous between the specialist (in terms of technical-scientific aspects) and indigenous knowledge. What controversy is that the balance between these factors not only cannot be established on the basis of pre-complexes versions and varies according to the natural characteristics of their resources and their complications in different regions.

The need for participation in watershed management can be mentioned in the following cases:

1. Decentralization: With the participation of people in the management of watersheds, government representatives will be able to provide more services in order to empower farmers to provide a desirable local management of water resources, and farmers as the most water consumers on the downstream side will play a part in the role of the partners instead of the beneficiaries. Made in this regard, the success rate of a program in a watershed does not depend on a government

- support system or a specific structure. More precisely, the results of research show that the success of participatory watershed management is characterized by the complex nature of the site, regional issues, local governments, government agencies, owners, and the level of participation demand.
- 2. Social dimension: The principles that the social structure of each region is one of the issues that provides conditions for the conservation and restoration of the resources of the area or, conversely, its destruction and instability.
- 3. Residents of the watershed are considered as part of the elements located in the area. Therefore, for the sustainable and effective management of the source of the watershed, participation of indigenous people as an integral part of the catchment components of the area concerned is required.
- 4. Economic Dimensions: From the financial dimension, also by the participation of the people in the field and the optimal utilization of the resources of the area, many of the expenditures currently spent by the government on the restoration of the mechanical and even biological investments, which, in the watershed, make a suitable combination of public participation, Manpower requires human resources, data information, culture and human and professional resources.
- 5. Sustainability: To maintain equilibrium and stability of the watershed as a system, one should look at all aspects and elements of the system in relation to each other. This attitude is known as Watershed Management in the term "Watershed Management", which is indispensable for planning the sustainability of watersheds as a dynamic system.

Watershed management, along with attracting public participation or participatory management of watersheds, is a approach proposed to exit from impasse. It can be said that watershed management has a total of hardware (physical and biological) and software (culture or warning and awareness-raising systems) for monitoring and upgrading Natural resources are recoverable.

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